

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
28 October 2004 (28.10.2004)

PCT

(10) International Publication Number
WO 2004/092977 A3

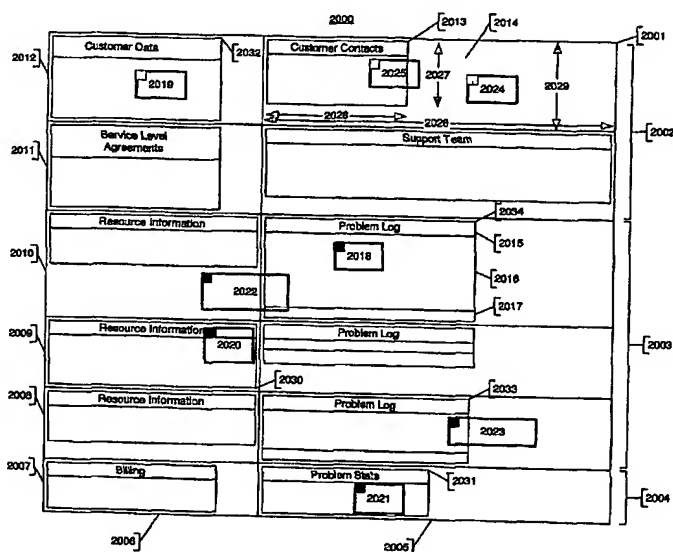
- (51) International Patent Classification⁷: **G06F 17/24**
- (21) International Application Number:
PCT/EP2004/003048
- (22) International Filing Date: 27 February 2004 (27.02.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
03368037.2 18 April 2003 (18.04.2003) EP
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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

[Continued on next page]

(54) Title: **SYSTEM AND METHOD IN A DATA TABLE FOR CREATING RECURSIVE SCALABLE TEMPLATE INSTANCES**



(57) Abstract: The present invention is directed to a method, system and program, in a multi-dimensional electronic data table comprising a plurality of data, for creating one or plurality of recursive scalable template instances; a recursive scalable template instance comprising a variable number of contiguous recursive element instances ordered and aligned along a first data table dimension and structured according to a recursive scalable template; a recursive element instance being defined as comprising one or a plurality of scalable template instances; a scalable template instance comprising a variable number of elements structured according to a scalable template; an element being defined as a range of data; a range of data comprising one or a plurality of data; a recursive scalable template comprising a recursive element comprising one or a plurality of scalable templates. The method comprises for each recursive scalable template instance to create, the steps of: • Selecting a recursive scalable template; • Defining a

location for creating a recursive scalable template instance; • Creating at the defined location one or a plurality of contiguous recursive element instances ordered and aligned along a first data table dimension; each recursive element instance having a variable size along said first data table dimension and a same size along a second data table dimension; • Structuring each recursive element instance according to the recursive element defined for the recursive scalable template; • Aligning each scalable template instance of each recursive element instance along said first data table dimension; • Aligning within each recursive element instance, each scalable template instance along said second data table dimension.

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Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

Declaration under Rule 4.17:

— *of inventorship (Rule 4.17(iv)) for US only*

Published:

— *with international search report*

(88) Date of publication of the international search report:

18 August 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/003048

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G06F17/24

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, IBM-TDB

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 03/014987 A (INTERNATIONAL BUSINESS MACHINES CORPORATION) 20 February 2003 (2003-02-20) cited in the application the whole document	1-24
A	US 5 033 009 A (DUBNOFF) 16 July 1991 (1991-07-16) cited in the application the whole document	1-24
A	US 2001/049683 A1 (YOSHIKAWA) 6 December 2001 (2001-12-06) paragraph '0030! - paragraph '0035! paragraph '0041! paragraph '0182! - paragraph '0186! ----- -/--	1-24

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

28 June 2005

Date of mailing of the international search report

08/07/2005

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/003048

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>DJANG R W ET AL: "Similarity inheritance: a new model of inheritance for spreadsheet VPLs"</p> <p>VISUAL LANGUAGES, 1998. PROCEEDINGS. 1998 IEEE SYMPOSIUM ON HALIFAX, NS, CANADA 1-4 SEPT. 1998, LOS ALAMITOS, CA, USA, IEEE COMPUT. SOC, US, 1 September 1998 (1998-09-01), pages 134-141, XP010297367 ISBN: 0-8186-8712-6 the whole document</p>	1-24
T	<p>HENRION: "WHAT'S WRONG WITH SPREADSHEETS - AND HOW TO FIX THEM WITH ANALYTICA" 'Online!</p> <p>14 July 2004 (2004-07-14), XP002333472 Retrieved from the Internet: URL: http://www.lumina.com/dlana/papers/Whats%20wrong%20with%20spreadsheets.pdf 'retrieved on 2005-06-24! the whole document</p>	1-24

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/003048

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 03014987	A	20-02-2003	WO 03014987 A2	20-02-2003
			EP 1456786 A2	15-09-2004
			US 2005015379 A1	20-01-2005
US 5033009	A	16-07-1991	NONE	
US 2001049683	A1	06-12-2001	JP 3058129 B2	04-07-2000
			JP 11025197 A	29-01-1999
			US 6327592 B1	04-12-2001